SA-VE835ED/WMS835/ SS-MS835

SERVICE MANUAL

Ver 1.1 2002. 08

US Model
Canadian Model
AEP Model
UK Model
E Model

The SA-VE835ED system consists of one unit of SA-WMS835 and five units of SS-MS835.

SA-WMS835 | SS-MS835 (front and rear) | SS-MS835 (center)

SPECIFICATIONS

SA-VE835ED
For the U.S. model
AUDIO POWER SPECIFICATIONS
POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
with 3.75 ohm loads both channels driven, from 20 – 200 Hz; rated 200 watts per channel minimum RMS power, with no more than 0.8% total harmonic distortion from 250 milliwatts to rated output.

SS-MS835 (front, center, and rear speakers)

Speaker system	2 way, magnetically shielded
Speaker units	Tweeter: 1.9 cm (3/4 in.), dome type Woofer: 5.7 cm (2 1/4 in.) × 2, cone type
Enclosure type	Bass reflex
Rated impedance	8 ohms
Power handling capacity	
Maximum input power:	140 W
Sensitivity level	87 dB (1 W, 1 m)
Frequency range	120 Hz – 70,000 Hz
Dimensions (w/h/d)	
When attached speaker grilles:	Approx. 90 × 182 × 147 mm (3 5/8 × 7 1/4 × 5 7/8 in.) each
When attached to supplied speaker stand:	Approx. 97 × 220 × 158 mm (3 7/8 × 8 3/4 × 6 1/4 in.) each, (Front (and rear) speakers) Approx.182 × 145 × 163 mm (7 1/4 × 5 3/4 × 6 1/2 in.), (Center speaker: pointed upwards) Approx.182 × 123 × 163 mm (7 1/4 × 4 7/8 × 6 1/2 in.), (Center speaker: pointed downwards)
Mass	
When attached speaker grilles:	Approx. 1.3 kg (2 lb 14 oz) each
When attached to supplied speaker stand:	Approx. 1.4 kg (3 lb 1 oz) each, (Front (and rear) speakers) Approx. 1.4 kg (3 lb 1 oz), (Center speaker)

SA-WMS835 (subwoofer)

Speaker system	Active subwoofer, magnetically shielded
Speaker unit	Woofer: 20 cm (8 in.), cone type
Enclosure type	Advanced SAW type
Reproduction frequency range	24 Hz – 200 Hz
Continuous RMS power output	200 W (3.75 ohms, 20 – 200 Hz, 0.8% THD)

Inputs
LINE IN (input pin jack)

General

Power requirements	120 V AC, 60 Hz (US, CND, MX model) 220 – 240 V AC, 50/60 Hz (AEP, UK, SP, AR, KR model)
Power consumptions	50 W 1 W (standby mode)
Dimensions (w/h/d)	Approx. 230 × 395 × 485 mm (9 1/8 × 15 5/8 × 19 1/8 in.), including front grille
Mass	Approx. 15.5 kg (34 lb 3 oz)

Supplied accessories
Speaker stands (for the front and rear speakers) (4)
Speaker stand (for the center speaker) (1)
Screws (for the speaker stands) (5)
Washers (for the speaker stands) (5)
L-shaped Allen (Hex) Head wrench (1)
Speaker connecting cords, 10 m (32 ft 9 3/4 in.) (2)
Speaker connecting cords, 3.5 m (11 ft 6 in.) (3)
Audio connecting cord (1)

Design and specifications are subject to change without notice.

• Abbreviation
CND : Canadian model
SP : Singapore model
MX : Mexican model
AR : Argentine model
KR : Korean model

MICRO SATELLITE SYSTEM

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Home Audio Company
Published by Sony Engineering Corporation

SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

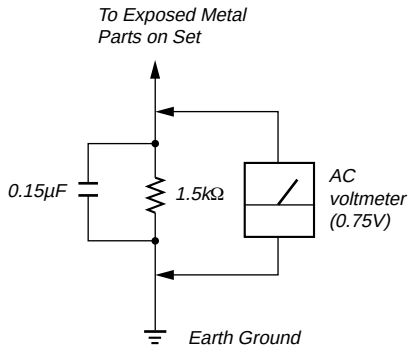

Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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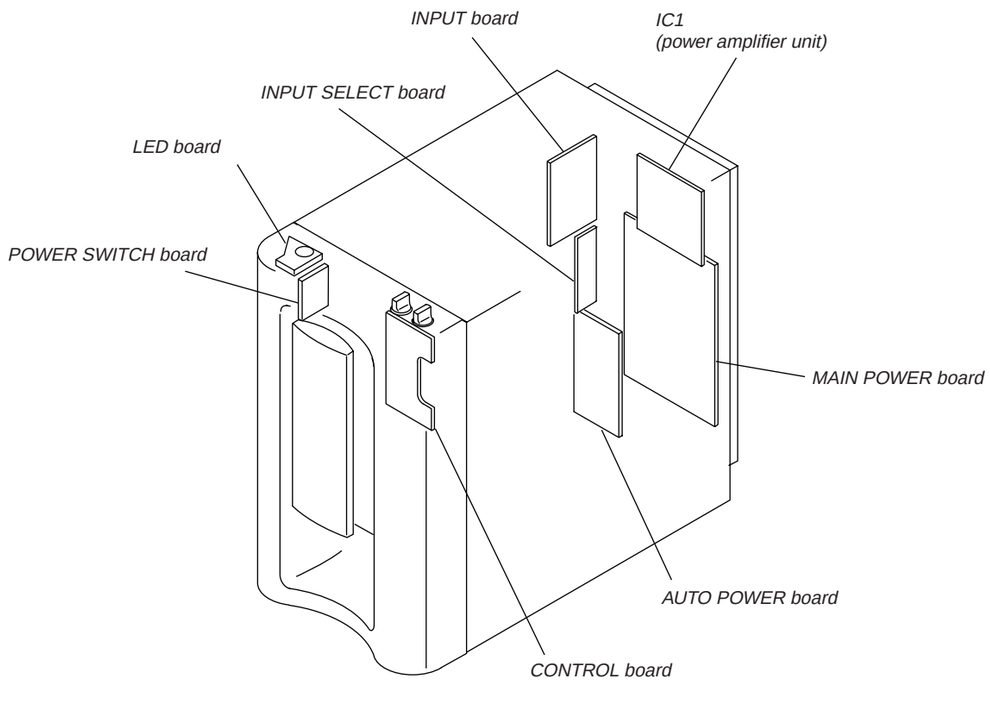
SECTION 1
DIAGRAMS

1-1. CIRCUIT BOARDS LOCATION (SA-WMS835)



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

for schematic diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- : nonflammable resistor.
- : panel designation.

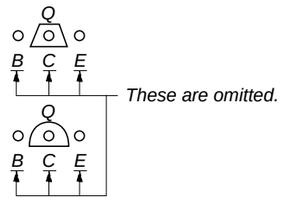
Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

- : B+ Line.
- : B– Line.
- Voltage is dc with respect to ground under no-signal (detuned) condition.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : AUDIO
- Abbreviation
  CND : Canadian model.
  SP : Singapore model.

for printed wiring boards:

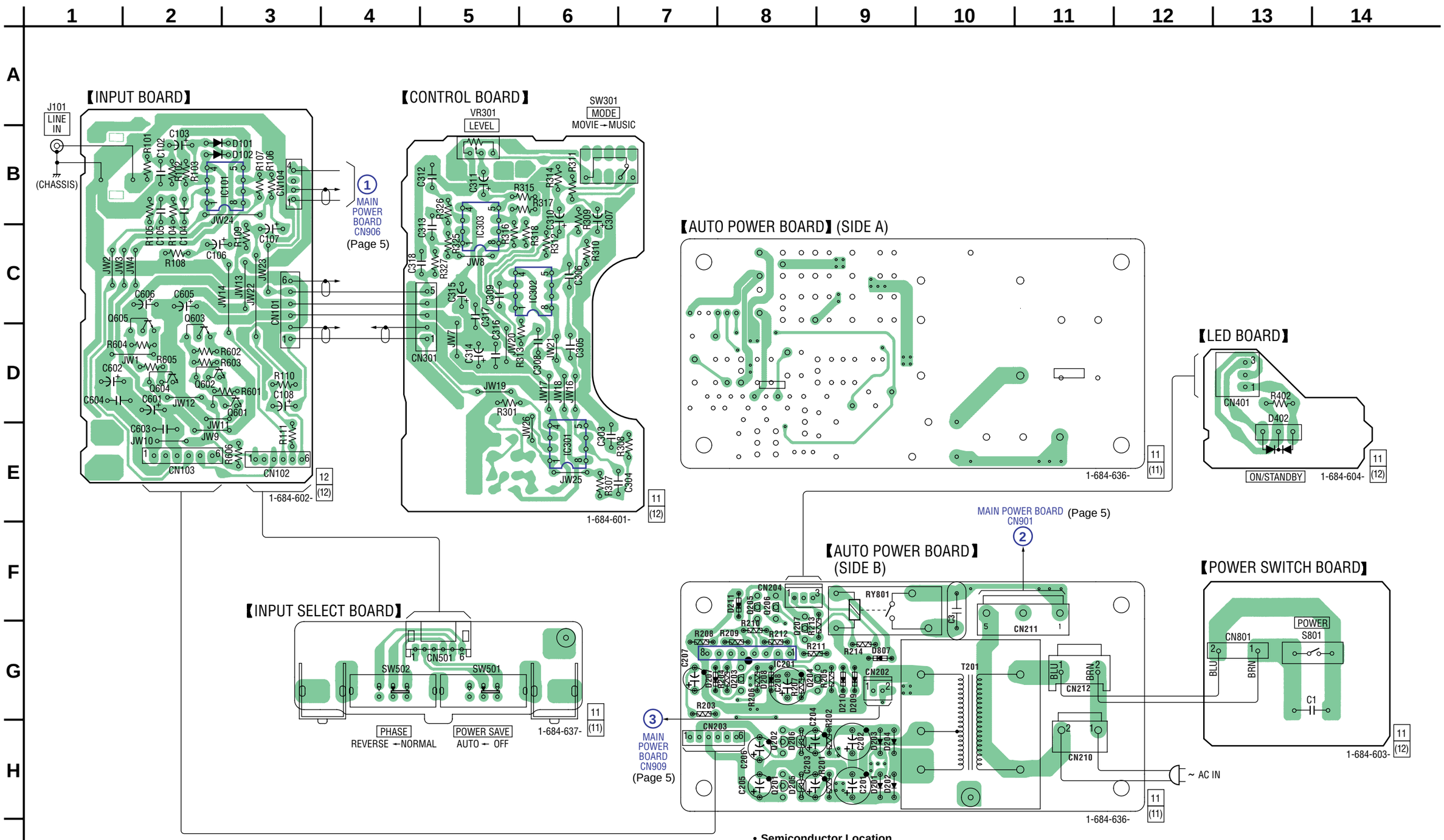
- : parts extracted from the component side.
- : Pattern from the side which enables seeing.
- Abbreviation
  CND : Canadian model.
  SP : Singapore model.
  MX : Mexican model.
  AR : Argentine model.
  KR : korean model.

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.



These are omitted.

1-2. PRINTED WIRING BOARDS (SA-WMS835) — AUDIO SECTION — • Refer to page 3 for Circuit Boards Location.

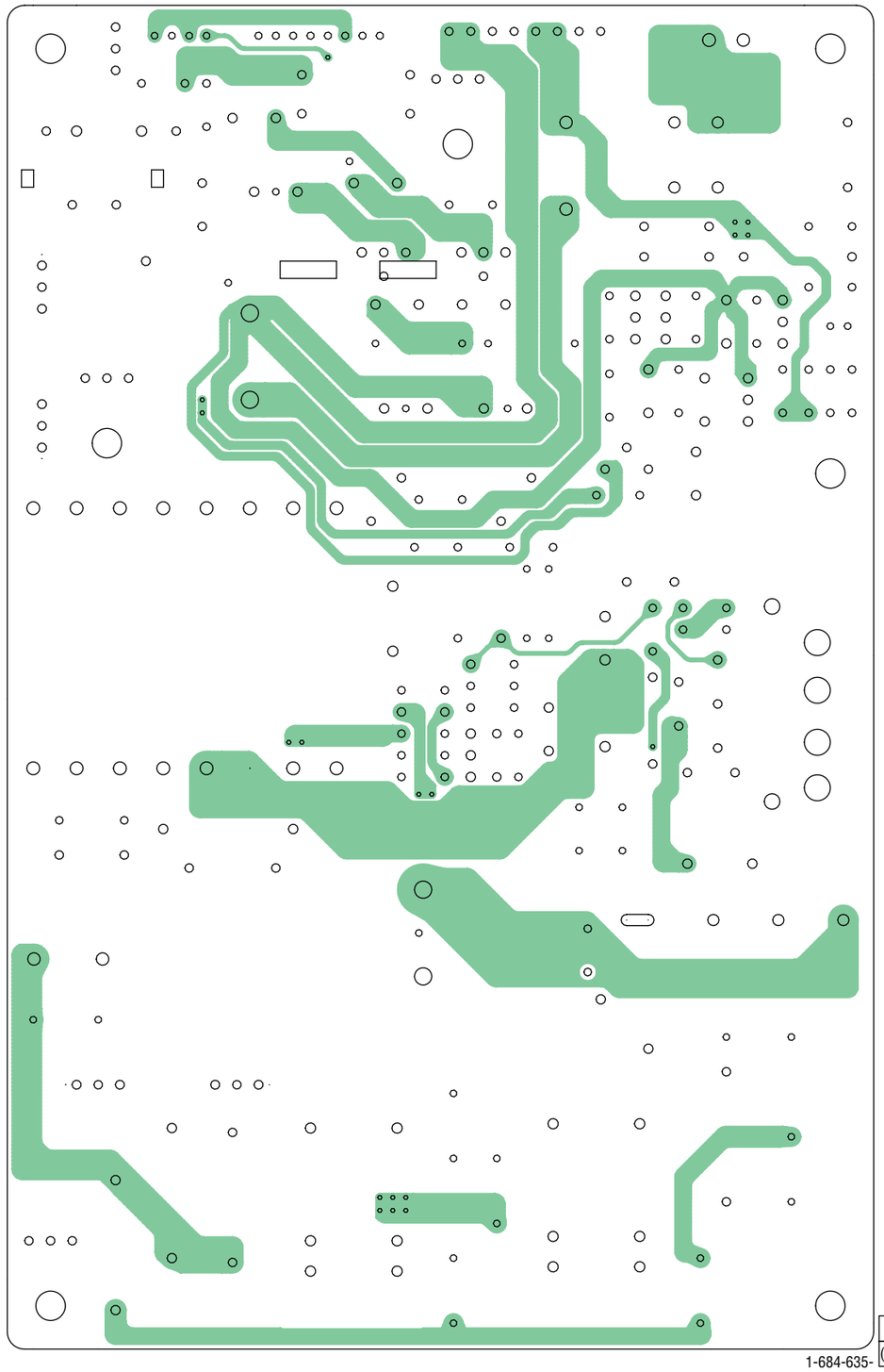


• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D101	B-3	D211	G-8	Q202	H-8
D102	B-3	D402	E-13	Q203	G-8
D201	H-9	D807	G-9	Q204	G-8
D202	H-9			Q205	F-8
D203	H-9	IC101	B-3	Q206	F-8
D204	H-9	IC201	G-8	Q207	G-8
D205	H-8	IC301	E-6	Q601	D-3
D206	H-8	IC302	C-6	Q602	D-2
D207	G-7	IC303	C-5	Q603	D-2
D208	G-8			Q604	D-2
D209	G-9	Q201	H-8	Q605	D-2
D210	G-9				

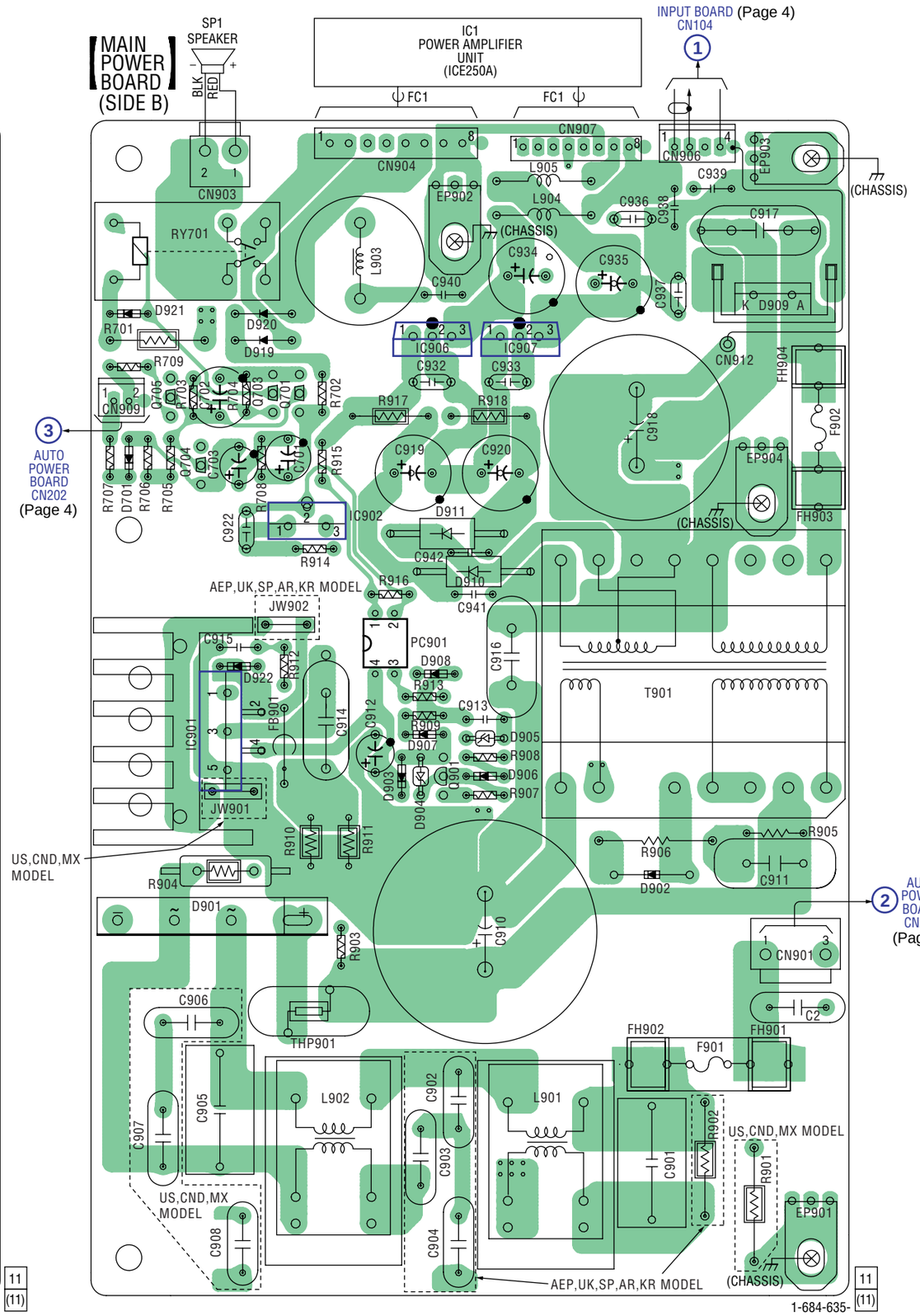
1-3. PRINTED WIRING BOARDS (SA-WMS835) — MAIN POWER SECTION — • Refer to page 3 for Circuit Boards Location.

【MAIN POWER BOARD】(SIDE A)



1-684-635-11 (11)

【MAIN POWER BOARD (SIDE B)】

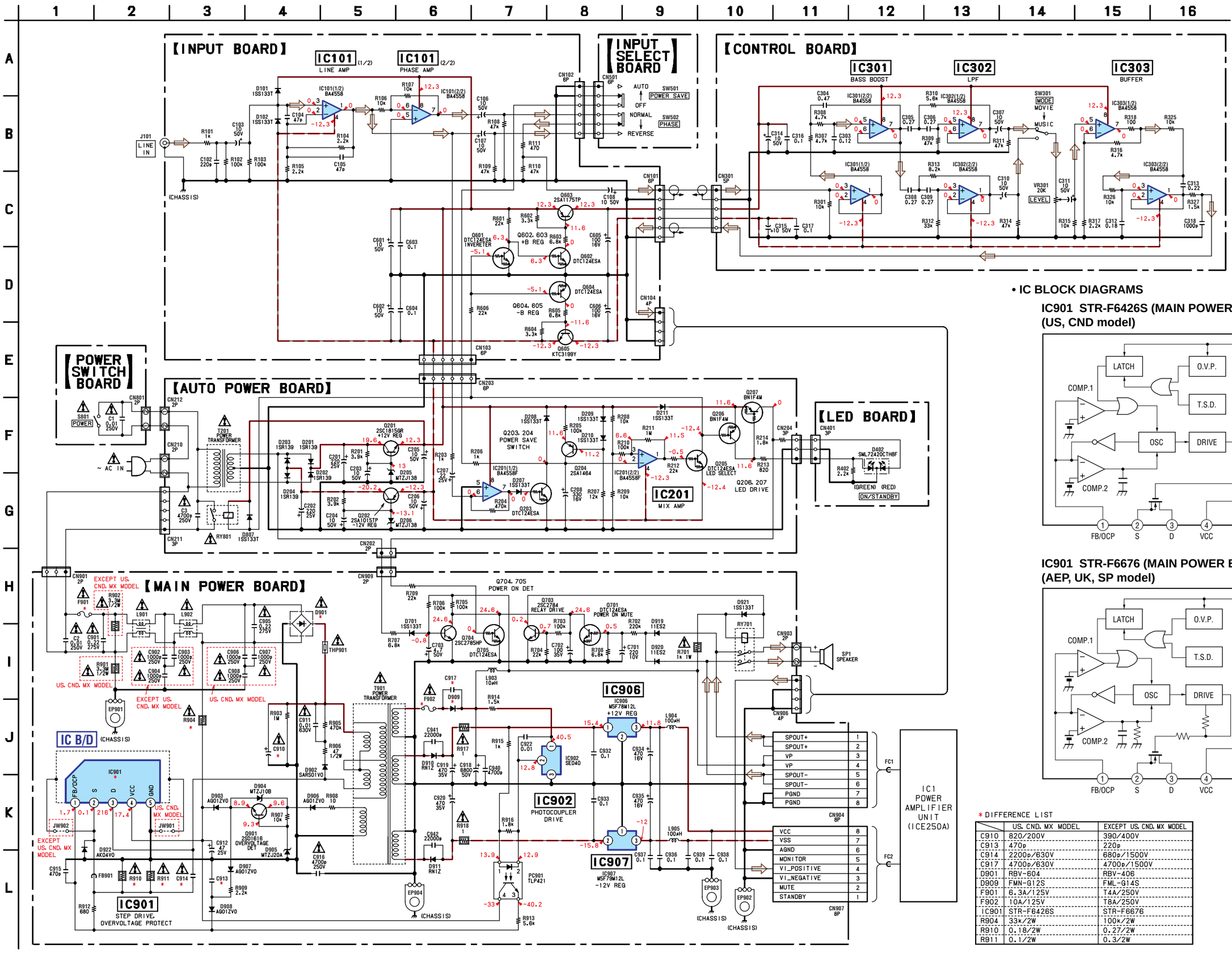


1-684-635-11 (11)

• **Semiconductor Location**

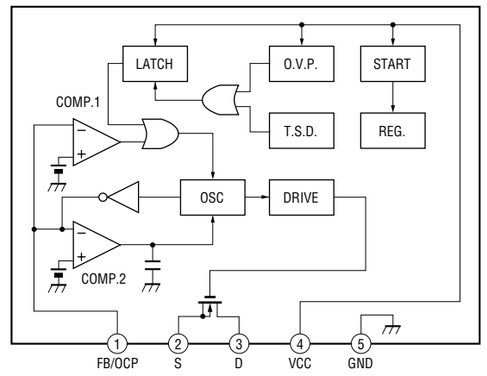
Ref. No.	Location
D701	D-7
D901	H-8
D902	G-11
D903	G-9
D904	G-9
D905	F-10
D906	G-10
D907	F-9
D908	F-9
D909	C-12
D910	E-10
D911	E-10
D919	C-8
D920	C-8
D921	C-7
D922	F-8
IC901	F-8
IC902	E-8
IC906	C-9
IC907	C-10
PC901	F-9
Q701	D-8
Q703	D-8
Q704	D-8
Q705	D-7
Q901	G-9

1-4. SCHEMATIC DIAGRAM (SA-WMS835)

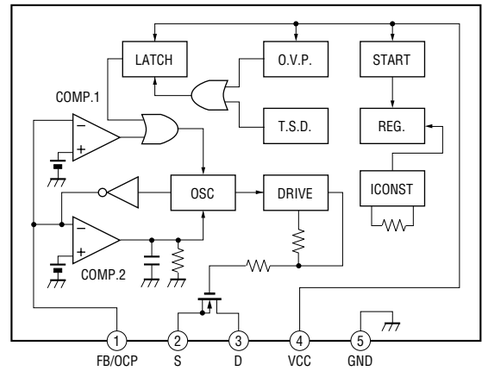


• IC BLOCK DIAGRAMS

IC901 STR-F6426S (MAIN POWER BOARD) (US, CND model)



IC901 STR-F6676 (MAIN POWER BOARD) (AEP, UK, SP model)



* DIFFERENCE LIST

	US, CND, MX MODEL	EXCEPT US, CND, MX MODEL
C910	820/200V	390/400V
C913	470p	220p
C914	2200p/630V	680p/1500V
C917	4700p/630V	4700p/1500V
D901	RBV-604	RBV-406
D909	FMN-G12S	FML-G14S
F901	6.3A/125V	T4A/250V
F902	10A/125V	T8A/250V
IC901	STR-F6426S	STR-F6676
R904	33k/2W	100k/2W
R910	0.18/2W	0.27/2W
R911	0.1/2W	0.3/2W

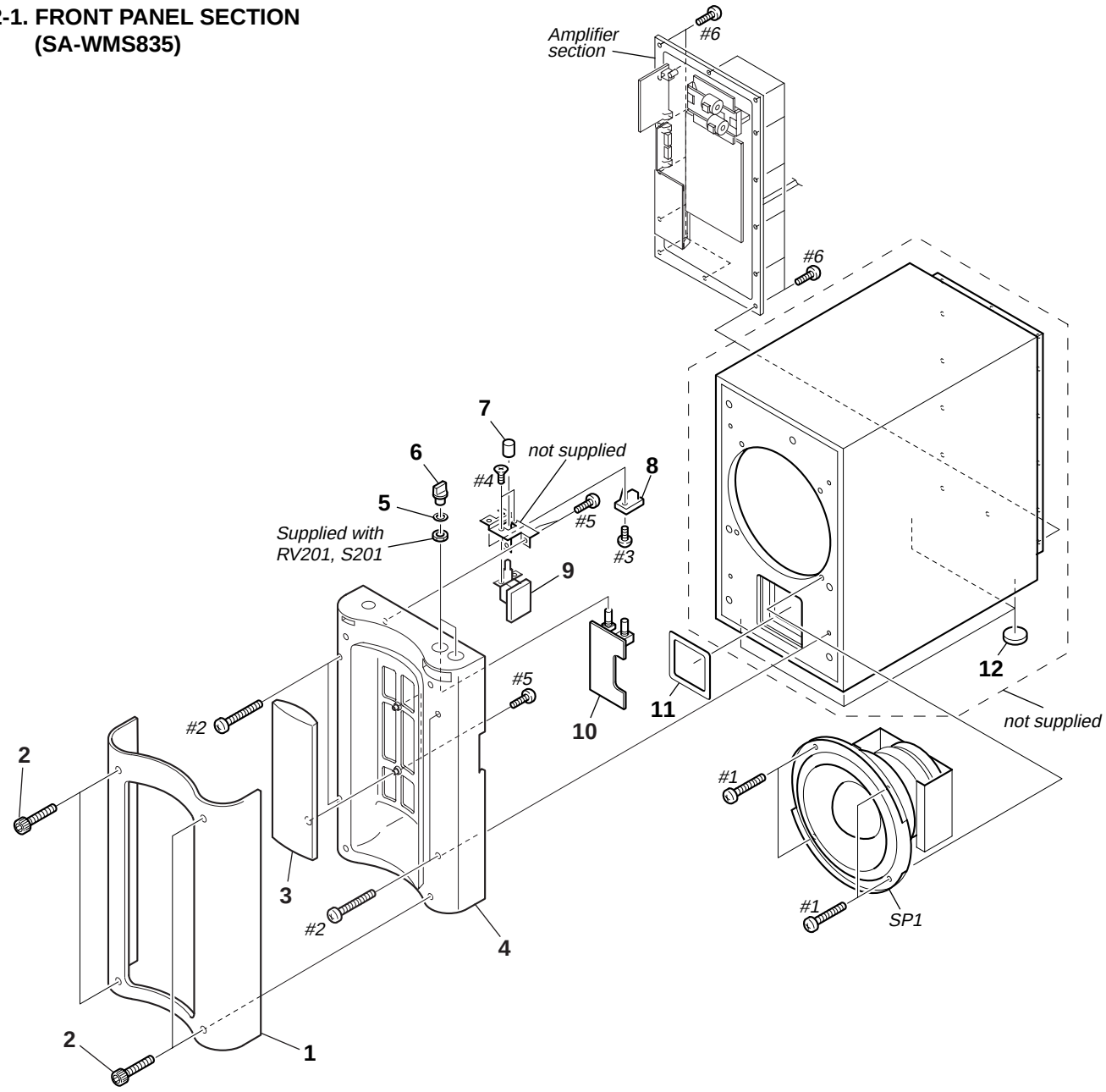
SECTION 2
EXPLODED VIEWS

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  CND : Canadian model
  SP : Singapore model
  MX : Mexican model
  AR : Argentine model
  KR : Korean model
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Accessories are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

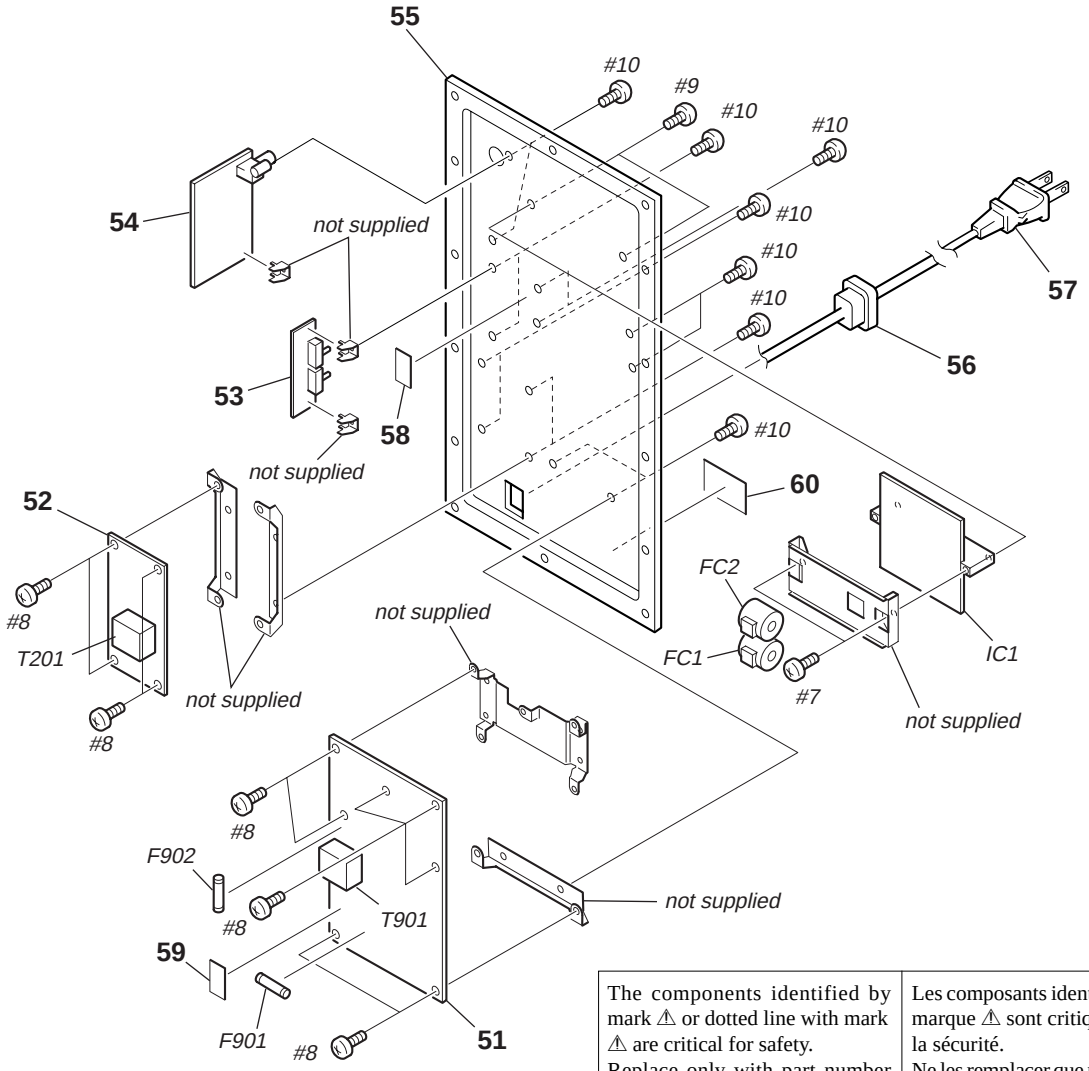
2-1. FRONT PANEL SECTION (SA-WMS835)



Ref. No.	Part No.	Description	Remark
1	4-239-121-01	PANEL (A)	
2	4-222-422-01	SCREW (4X16)	
3	4-239-122-01	PANEL (B)	
4	X-4954-549-1	PANEL ASSY, FRONT (US,CND,MX)	
4	X-4954-604-1	PANEL ASSY, FRONT (AEP,UK,SP,AR,KR)	
5	4-217-642-01	SHEET	
6	4-239-313-01	KNOB (VOL)	
7	4-973-938-31	KNOB (A), PUSH	
8	1-684-604-11	LED BOARD	
9	A-4728-653-A	POWER SWITCH BOARD, COMPLETE	

Ref. No.	Part No.	Description	Remark
10	A-4728-651-A	CONTROL BOARD, COMPLETE	
11	4-222-467-01	PACKING	
12	4-981-864-01	FOOT	
SP1	1-825-067-11	SPEAKER (20cm)	
#1	7-685-664-79	SCREW +P 4X20 TYPE1	
#2	7-685-165-01	SCREW +PTP 4X25 TYPE1	
#3	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S	
#4	7-682-147-01	SCREW +P 3X6	
#5	7-682-148-01	SCREW +P 3X8	
#6	7-685-663-79	SCREW +BVTP 4X16 TYPE2 N-S	

2-2. REAR PANEL SECTION (SA-WMS835)

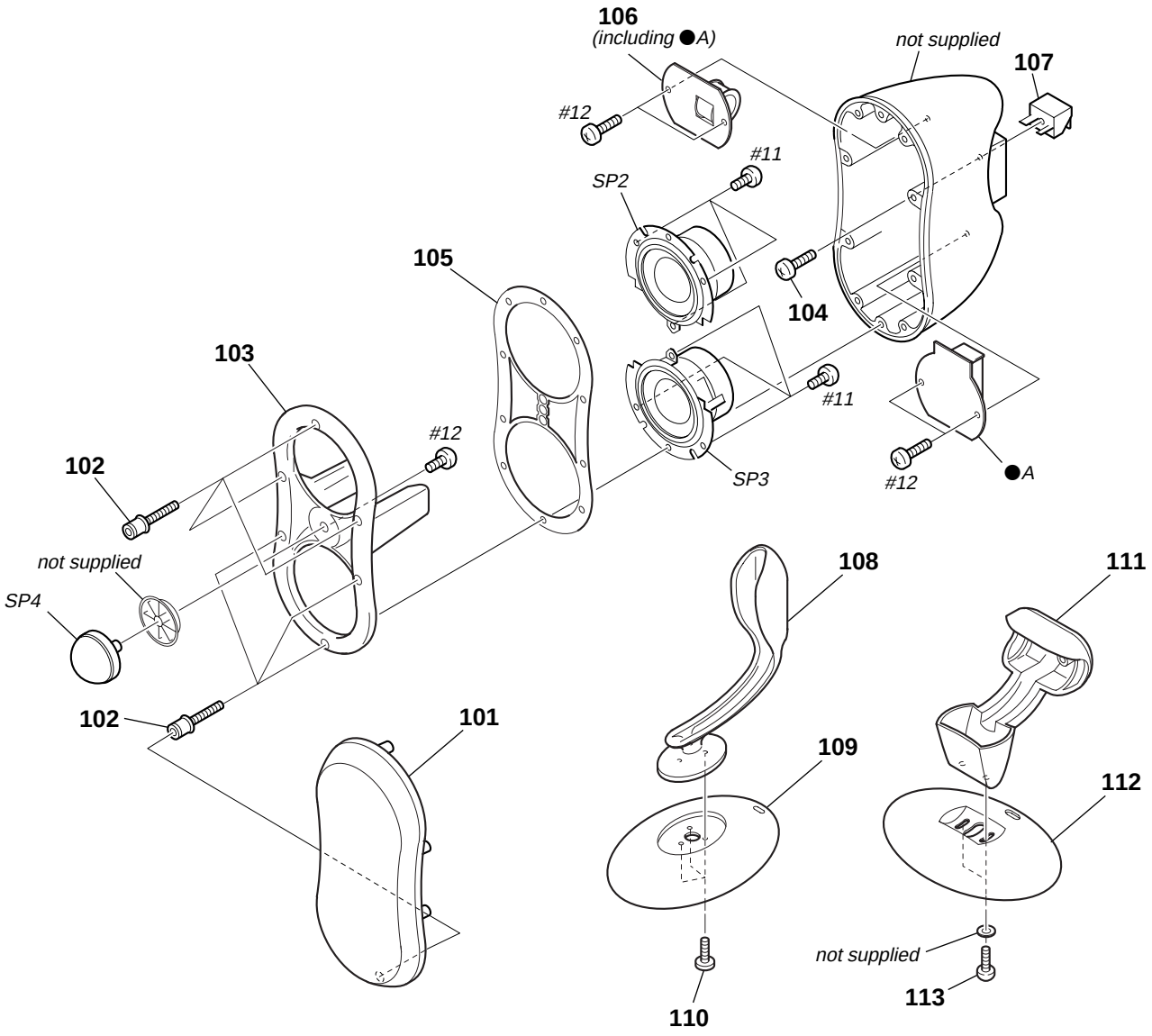


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
51	A-4676-377-A	MAIN POWER BOARD, COMPLETE (US,CND,MX)	
51	A-4676-386-A	MAIN POWER BOARD, COMPLETE (AEP,UK,SP,AR,KR)	
52	A-4676-383-A	AUTO POWER BOARD, COMPLETE	
53	1-684-637-11	INPUT SELECT BOARD	
54	A-4728-652-A	INPUT BOARD, COMPLETE	
55	4-239-408-01	PANEL, REAR (US,MX)	
55	4-239-408-11	PANEL, REAR (CND)	
55	4-239-408-21	PANEL, REAR (AEP,UK,SP)	
55	4-239-408-41	PANEL, REAR (AR)	
55	4-239-408-51	PANEL, REAR (KR)	
* 56	3-703-244-00	BUSHING (2104), CORD	
⚠57	1-769-744-52	CORD, POWER (AEP,SP)	
⚠57	1-696-570-21	CORD, POWER (UK)	
⚠57	1-783-820-11	CORD, POWER (US,CND)	
⚠57	1-783-941-22	CORD, POWER (AR)	
⚠57	1-824-778-11	CORD, POWER (KR)	
58	3-701-946-31	LABEL, FUSE RATING (US,CND,MX)	
* 59	3-701-946-28	LABEL, FUSE RATING (US,CND,MX)	
* 60	3-703-044-26	LABEL, CAUTION (US,CND,MX)	

Ref. No.	Part No.	Description	Remark
⚠F901	1-532-504-31	FUSE, CYLINDRICAL (TIME-LAG) (T4A/250V) (AEP,UK,SP,AR,KR)	
⚠F901	1-533-310-11	FUSE, GLASS CYLINDRICAL (DIA.5) (6.3A/125V) (US,CND,MX)	
⚠F902	1-533-312-11	FUSE, GLASS CYLINDRICAL (DIA.5) (10A/125V) (US,CND,MX)	
⚠F902	1-533-949-31	FUSE, CYLINDRICAL (TIME-LAG) (T8A/250V) (AEP,UK,SP,AR,KR)	
FC1	1-543-993-11	CORE, FERRITE	
FC2	1-543-993-11	CORE, FERRITE	
IC1	6-700-752-01	IC ICE250A-SW	
⚠T201	1-437-793-11	TRANSFORMER, POWER (US,CND,MX)	
⚠T201	1-437-794-11	TRANSFORMER, POWER (AEP,UK,SP,AR,KR)	
⚠T901	1-437-232-11	TRANSFORMER, POWER (US,CND,MX)	
⚠T901	1-437-233-11	TRANSFORMER, POWER (AEP,UK,SP,AR,KR)	
#7	7-685-160-19	SCREW +P 4X10 TYPE2 NON-SLIT	
#8	7-685-751-09	SCREW +PTT 3X6 (S)	
#9	7-682-560-09	SCREW +B 4X6	
#10	7-685-871-09	SCREW +BVTT 3X6 (S)	

2-3. SPEAKER SECTION (SS-MS835)



Ref. No.	Part No.	Description	Remark
101	X-4954-548-1	FRAME ASSY (V), GRILLE (VERTICAL TYPE)	
101	X-4954-566-1	FRAME ASSY (H), GRILLE (HOLIZONTAL TYPE)	
102	4-238-678-01	SCREW, ORNAMENTAL	
103	4-239-114-01	PANEL, FRONT	
104	4-986-971-11	SCREW (3.5)	
105	4-239-118-01	PACKING	
106	1-761-530-11	MAIN BOARD	
107	1-694-516-21	TERMINAL, SPEAKER	
108	4-239-107-01	STAY (V)	
109	4-239-106-01	BASE (V)	
110	4-222-029-01	SCREW (+P 3.5X14)	
111	4-239-109-01	STAY (H)	
112	4-239-108-01	BASE (H)	
113	4-219-450-01	SCREW (M5X16)	
SP2	1-825-068-11	SPEAKER (5.7cm)	
SP3	1-825-068-11	SPEAKER (5.7cm)	
SP4	1-825-079-11	SPEAKER (1.9cm)	
#11	7-682-145-01	SCREW +P 3X4	
#12	7-682-150-01	SCREW +P 3X12	

SECTION 3
ELECTRICAL PARTS LIST

AUTO POWER

CONTROL

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Abbreviation
  CND : Canadian model
  SP : Singapore model
  MX : Mexican model
  AR : Argentine model
  KR : Korean model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ, for example:
  uA.. : µA.. uPA.. : µPA..
  uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
  uF : µF
- COILS
  uH : µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-4676-383-A	AUTO POWER BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
⚠C3	1-113-924-11	CERAMIC	0.0047uF	20%	250V
C201	1-104-666-11	ELECT	220uF	20%	25V
C202	1-104-666-11	ELECT	220uF	20%	25V
C203	1-126-964-11	ELECT	10uF	20%	50V
C204	1-126-964-11	ELECT	10uF	20%	50V
C205	1-126-964-11	ELECT	10uF	20%	50V
C206	1-126-964-11	ELECT	10uF	20%	50V
C207	1-128-551-11	ELECT	22uF	20%	25V
C208	1-126-940-11	ELECT	330uF	20%	16V
		< CONNECTOR >			
* CN202	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			
* CN204	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN210	1-564-321-00	PIN, CONNECTOR 2P			
* CN211	1-565-395-11	PIN, CONNECTOR 3P			
CN212	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P			
		< DIODE >			
D201	8-719-200-82	DIODE 11ES2			
D202	8-719-200-82	DIODE 11ES2			
D203	8-719-200-82	DIODE 11ES2			
D204	8-719-200-82	DIODE 11ES2			
D205	8-719-110-36	DIODE RD13ES-B2			
D206	8-719-110-36	DIODE RD13ES-B2			
D207	8-719-991-33	DIODE 1SS133T-77			
D208	8-719-991-33	DIODE 1SS133T-77			
D209	8-719-991-33	DIODE 1SS133T-77			
D210	8-719-991-33	DIODE 1SS133T-77			
D211	8-719-991-33	DIODE 1SS133T-77			
D807	8-719-911-19	DIODE 1SS119-25			
		< IC >			
IC201	8-759-909-71	IC BA4558F			
		< TRANSISTOR >			
Q201	8-729-281-53	TRANSISTOR 2SC1815-GR			
Q202	8-729-231-12	TRANSISTOR 2SA1015TP-O			
Q203	8-729-029-86	TRANSISTOR DTC124ESA			
Q204	8-729-119-54	TRANSISTOR 2SA1464-T2Y13			
Q205	8-729-029-86	TRANSISTOR DTC124ESA			
Q206	8-729-029-40	TRANSISTOR DTA124ESA			
Q207	8-729-029-40	TRANSISTOR DTA124ESA			
		< RESISTOR >			
R201	1-249-424-11	CARBON	3.9K	5%	1/4W
R202	1-249-424-11	CARBON	3.9K	5%	1/4W
R203	1-249-417-11	CARBON	1K	5%	1/4W
R204	1-247-895-00	CARBON	470K	5%	1/4W
R205	1-249-441-11	CARBON	100K	5%	1/4W
R206	1-249-417-11	CARBON	1K	5%	1/4W
R207	1-249-430-11	CARBON	12K	5%	1/4W
R208	1-249-429-11	CARBON	10K	5%	1/4W
R209	1-249-429-11	CARBON	10K	5%	1/4W
R210	1-249-441-11	CARBON	100K	5%	1/4W
R211	1-247-903-00	CARBON	1M	5%	1/4W
R212	1-249-433-11	CARBON	22K	5%	1/4W
R213	1-249-416-11	CARBON	820	5%	1/4W
R214	1-249-420-11	CARBON	1.8K	5%	1/4W
		< RELAY >			
⚠RY801	1-755-458-11	RELAY			
**********					
	A-4728-651-A	CONTROL BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C303	1-131-693-31	FILM	0.12uF	5%	50V
C304	1-131-700-31	FILM	0.47uF	5%	50V
C305	1-131-697-31	FILM	0.27uF	5%	50V
C306	1-131-697-31	FILM	0.27uF	5%	50V
C307	1-126-964-11	ELECT	10uF	20%	50V
C308	1-131-697-31	FILM	0.27uF	5%	50V
C309	1-131-697-31	FILM	0.27uF	5%	50V
C310	1-126-964-11	ELECT	10uF	20%	50V
C311	1-126-964-11	ELECT	10uF	20%	50V
C312	1-131-695-11	FILM	0.18uF	5%	50V
C313	1-131-696-11	FILM	0.22uF	5%	50V
C314	1-126-964-11	ELECT	10uF	20%	50V
C315	1-126-964-11	ELECT	10uF	20%	50V
C316	1-164-159-21	CERAMIC	0.1uF		50V
C317	1-164-159-21	CERAMIC	0.1uF		50V
C318	1-130-471-00	MYLAR	0.001uF	5%	50V

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
CN301	1-779-179-11	CONNECTOR (B5B-XH-A) 5P			
		< IC >			
IC301	8-759-145-58	IC uPC4558C			
IC302	8-759-145-58	IC uPC4558C			
IC303	8-759-145-58	IC uPC4558C			
		< RESISTOR >			
R301	1-249-429-11	CARBON	10K	5%	1/4W
R307	1-249-425-11	CARBON	4.7K	5%	1/4W
R308	1-249-425-11	CARBON	4.7K	5%	1/4W
R309	1-249-437-11	CARBON	47K	5%	1/4W
R310	1-249-426-11	CARBON	5.6K	5%	1/4W
R311	1-249-437-11	CARBON	47K	5%	1/4W
R312	1-249-435-11	CARBON	33K	5%	1/4W
R313	1-249-428-11	CARBON	8.2K	5%	1/4W
R314	1-249-437-11	CARBON	47K	5%	1/4W
R315	1-249-429-11	CARBON	10K	5%	1/4W
R316	1-249-425-11	CARBON	4.7K	5%	1/4W
R317	1-249-421-11	CARBON	2.2K	5%	1/4W
R318	1-249-405-11	CARBON	100	5%	1/4W
R325	1-249-429-11	CARBON	10K	5%	1/4W
R326	1-249-429-11	CARBON	10K	5%	1/4W
R327	1-249-419-11	CARBON	1.5K	5%	1/4W
		< SWITCH >			
SW301	1-786-376-11	SWITCH, ROTARY (MODE)			
		< VARIABLE RESISTOR >			
VR301	1-227-491-11	RES, VAR 20K (LEVEL)			
**********					
	A-4728-652-A	INPUT BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C102	1-162-286-21	CERAMIC	220PF	10%	50V
C103	1-126-964-11	ELECT	10uF	20%	50V
C104	1-162-215-31	CERAMIC	47PF	5%	50V
C105	1-162-215-31	CERAMIC	47PF	5%	50V
C106	1-126-964-11	ELECT	10uF	20%	50V
C107	1-126-964-11	ELECT	10uF	20%	50V
C108	1-126-964-11	ELECT	10uF	20%	50V
C601	1-126-964-11	ELECT	10uF	20%	50V
C602	1-126-964-11	ELECT	10uF	20%	50V
C603	1-164-159-21	CERAMIC	0.1uF		50V
C604	1-164-159-21	CERAMIC	0.1uF		50V
C605	1-126-933-11	ELECT	100uF	20%	16V
C606	1-126-933-11	ELECT	100uF	20%	16V

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
* CN101	1-506-947-11	PIN, CONNECTOR 6P			
CN103	1-564-509-11	PLUG, CONNECTOR 6P			
* CN104	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
		< DIODE >			
D101	8-719-911-19	DIODE 1SS119-25			
D102	8-719-911-19	DIODE 1SS119-25			
		< IC >			
IC101	8-759-145-58	IC uPC4558C			
		< JACK >			
J101	1-794-436-11	JACK, PIN 1P (LINE IN)			
		< TRANSISTOR >			
Q601	8-729-029-86	TRANSISTOR DTC124ESA			
Q602	8-729-029-86	TRANSISTOR DTC124ESA			
Q603	8-729-119-77	TRANSISTOR 2SA1175-FEK			
Q604	8-729-029-86	TRANSISTOR DTC124ESA			
Q605	8-729-016-43	TRANSISTOR KTC3199Y-TP			
		< RESISTOR >			
R101	1-249-417-11	CARBON	1K	5%	1/4W
R102	1-249-441-11	CARBON	100K	5%	1/4W
R103	1-249-441-11	CARBON	100K	5%	1/4W
R104	1-249-421-11	CARBON	2.2K	5%	1/4W
R105	1-249-421-11	CARBON	2.2K	5%	1/4W
R106	1-249-429-11	CARBON	10K	5%	1/4W
R107	1-249-429-11	CARBON	10K	5%	1/4W
R108	1-249-437-11	CARBON	47K	5%	1/4W
R109	1-249-437-11	CARBON	47K	5%	1/4W
R110	1-249-437-11	CARBON	47K	5%	1/4W
R111	1-249-413-11	CARBON	470	5%	1/4W
R601	1-249-433-11	CARBON	22K	5%	1/4W
R602	1-247-843-11	CARBON	3.3K	5%	1/4W
R603	1-249-427-11	CARBON	6.8K	5%	1/4W
R604	1-247-843-11	CARBON	3.3K	5%	1/4W
R605	1-249-427-11	CARBON	6.8K	5%	1/4W
R606	1-249-433-11	CARBON	22K	5%	1/4W
**********					
	1-684-637-11	INPUT SELECT BOARD			
		**********			
		< CONNECTOR >			
CN501	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P			
		< SWITCH >			
SW501	1-570-707-31	SWITCH, SLIDE (POWER SAVE)			
SW502	1-570-707-31	SWITCH, SLIDE (PHASE)			
**********					

LED MAIN POWER

Ref. No.	Part No.	Description			Remark
	1-684-604-11	LED BOARD			
		**********			
		< CONNECTOR >			
* CN401	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< DIODE >			
D402	8-719-061-31	LED SML72420CTH8F (ON/STANDBY)			
		< RESISTOR >			
R402	1-249-421-11	CARBON	2.2K	5%	1/4W
**********					
	A-4676-377-A	MAIN POWER BOARD, COMPLETE (US,CND,MX)			
	A-4676-386-A	MAIN POWER BOARD, COMPLETE			(AEP,UK,SP,AR,KR)
		**********			
	1-533-233-11	HOLDER, FUSE			
		< CAPACITOR >			
⚠C2	1-113-925-11	CERAMIC	0.01uF	20%	250V
C701	1-126-934-11	ELECT	220uF	20%	10V
C702	1-126-948-11	ELECT	100uF	20%	35V
C703	1-126-963-11	ELECT	4.7uF	20%	50V
⚠C901	1-117-916-11	FILM	0.22uF		275V
⚠C902	1-113-915-11	CERAMIC	0.001uF	20%	250V (AEP,UK,SP,AR,KR)
⚠C903	1-113-915-11	CERAMIC	0.001uF	20%	250V (AEP,UK,SP,AR,KR)
⚠C904	1-113-915-11	CERAMIC	0.001uF	20%	250V (AEP,UK,SP,AR,KR)
⚠C905	1-117-916-11	FILM	0.22uF		275V
⚠C906	1-113-915-11	CERAMIC	0.001uF	20%	250V (US,CND,MX)
⚠C907	1-113-915-11	CERAMIC	0.001uF	20%	250V (US,CND,MX)
⚠C908	1-113-915-11	CERAMIC	0.001uF	20%	250V (US,CND,MX)
⚠C910	1-137-994-11	ELECT	820uF	20%	200V (US,CND,MX)
⚠C910	1-165-626-11	ELECT	390uF	20%	400V (AEP,UK,SP,AR,KR)
⚠C911	1-165-706-91	FILM	0.01uF	5%	630V
C912	1-126-947-11	ELECT	47uF	20%	25V
C913	1-162-286-31	CERAMIC	220PF	10%	50V (AEP,UK,SP,AR,KR)
C913	1-162-290-31	CERAMIC	470PF	10%	50V (US,CND,MX)
⚠C914	1-125-893-11	FILM	680PF	3%	1.5KV (AEP,UK,SP,AR,KR)
⚠C914	1-136-555-11	FILM	0.0022uF	5%	630V (US,CND,MX)
C915	1-162-290-31	CERAMIC	470PF	10%	50V
⚠C916	1-117-703-11	CERAMIC	0.0047uF		250V
C917	1-117-832-11	FILM	4700PF	3%	1.5KV (AEP,UK,SP,AR,KR)
C917	1-136-559-11	FILM	0.0047uF	5%	630V (US,CND,MX)
C918	1-115-361-11	ELECT	6800uF	20%	50V
C919	1-126-951-11	ELECT	470uF	20%	35V
C920	1-126-951-11	ELECT	470uF	20%	35V
C922	1-136-153-00	FILM	0.01uF	5%	50V
C932	1-136-165-00	FILM	0.1uF	5%	50V
C933	1-136-165-00	FILM	0.1uF	5%	50V
C934	1-126-935-11	ELECT	470uF	20%	16V
C935	1-126-935-11	ELECT	470uF	20%	16V
C936	1-136-165-00	FILM	0.1uF	5%	50V
C937	1-136-165-00	FILM	0.1uF	5%	50V
C938	1-164-159-21	CERAMIC	0.1uF		50V
C939	1-164-159-21	CERAMIC	0.1uF		50V
C940	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C941	1-161-494-00	CERAMIC	0.022uF		25V
C942	1-161-494-00	CERAMIC	0.022uF		25V
		< CONNECTOR >			
CN901	1-564-321-00	PIN, CONNECTOR 2P			
CN903	1-564-320-00	PIN, CONNECTOR (B2P-VH) 2P			
CN904	1-757-829-11	CORD, CONNECTION			
* CN906	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CN907	1-757-828-11	CORD, CONNECTION			
* CN909	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			
		< DIODE >			
D701	8-719-911-19	DIODE 1SS119-25			
⚠D901	8-719-022-92	DIODE RBV-604 (US,CND,MX)			
⚠D901	8-719-084-58	DIODE RBV-406 (AEP,UK,SP,AR,KR)			
D902	8-719-080-26	DIODE SARS01V0			
D903	8-719-075-11	DIODE AG01ZV0			
D904	8-719-110-17	DIODE RD10ES-B2			
D905	8-719-079-18	DIODE MTZJ-T-72-20A			
D906	8-719-075-11	DIODE AG01ZV0			
D907	8-719-075-11	DIODE AG01ZV0			
D908	8-719-075-11	DIODE AG01ZV0			
D909	8-719-049-98	DIODE FML-G14S (AEP,UK,SP,AR,KR)			
D909	8-719-058-38	DIODE FMN-G12S (US,CND,MX)			
D910	8-719-064-47	DIODE RN1Z-LF-B1			
D911	8-719-064-47	DIODE RN1Z-LF-B1			
D919	8-719-200-82	DIODE 11ES2			
D920	8-719-200-82	DIODE 11ES2			
D921	8-719-911-19	DIODE 1SS119-25			
D922	8-719-043-76	DIODE AK04V0			
		< TERMINAL BOARD >			
EP901	1-537-770-21	TERMINAL BOARD, GROUND			
EP902	1-537-770-21	TERMINAL BOARD, GROUND			
EP903	1-537-770-21	TERMINAL BOARD, GROUND			
EP904	1-537-770-21	TERMINAL BOARD, GROUND			

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Ref. No.	Part No.	Description				Remark
		< COIL >				
FB901	1-412-473-21	INDUCTOR (SMALL TYPE)				
		< IC >				
IC901	6-700-162-01	IC STR-F6426S (US,CND,MX)				
IC901	8-749-017-79	IC STR-F6676 (AEP,UK,SP,AR,KR)				
IC902	8-749-019-49	IC SE040				
IC906	8-759-604-39	IC M5F78M12L				
IC907	8-759-604-45	IC M5F79M12L				
		< COIL >				
⚠L901	1-416-778-11	FILTER, LINE (AEP,UK,SP,AR,KR)				
⚠L901	1-424-978-11	FILTER, LINE (US,CND,MX)				
⚠L902	1-416-778-11	FILTER, LINE (AEP,UK,SP,AR,KR)				
⚠L902	1-424-977-11	TRANSFORMER, LINE FILTER (US,CND,MX)				
L903	1-419-667-11	COIL, CHOKE	10uH			
L904	1-410-334-21	INDUCTOR	100uH			
L905	1-410-334-21	INDUCTOR	100uH			
		< PHOTO COUPLER >				
PC901	8-749-019-04	PHOTO COUPLER TLP421				
		< TRANSISTOR >				
Q701	8-729-029-86	TRANSISTOR DTC124ESA				
Q703	8-729-178-42	TRANSISTOR 2SC2784-F				
Q704	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q705	8-729-029-86	TRANSISTOR DTC124ESA				
Q901	8-729-111-29	TRANSISTOR 2SD1616A-K				
		< RESISTOR >				
⚠R701	1-215-869-11	METAL OXIDE	1K	5%	1W F	
R702	1-247-887-00	CARBON	220K	5%	1/4W	
R703	1-249-441-11	CARBON	100K	5%	1/4W	
R704	1-249-433-11	CARBON	22K	5%	1/4W	
R705	1-249-441-11	CARBON	100K	5%	1/4W	
R706	1-249-441-11	CARBON	100K	5%	1/4W	
R707	1-249-427-11	CARBON	6.8K	5%	1/4W	
R708	1-249-427-11	CARBON	6.8K	5%	1/4W	
R709	1-249-433-11	CARBON	22K	5%	1/4W	
⚠R901	1-202-725-00	SOLID	3.3M	10%	1/2W F (US,CND,MX)	
⚠R902	1-202-725-00	SOLID	3.3M	10%	1/2W F (AEP,UK,SP,AR,KR)	
R903	1-247-903-00	CARBON	1M	5%	1/4W	
⚠R904	1-215-901-00	METAL OXIDE	33K	5%	2W F (US,CND,MX)	
⚠R904	1-218-642-11	METAL OXIDE	100K	5%	1W F (AEP,UK,SP,AR,KR)	
R905	1-247-895-00	CARBON	470K	5%	1/4W	
R906	1-260-083-11	CARBON	47	5%	1/2W	
R907	1-249-429-11	CARBON	10K	5%	1/4W	
R908	1-249-393-11	CARBON	10	5%	1/4W	
R909	1-249-421-11	CARBON	2.2K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
⚠R910	1-240-858-11	METAL	0.27	5%	2W F (AEP,UK,SP,AR,KR)	
⚠R910	1-244-317-71	METAL	0.18	5%	2W F (US,CND,MX)	
⚠R911	1-219-984-51	METAL	0.1	5%	2W F (US,CND,MX)	
⚠R911	1-244-398-71	METAL	0.3	5%	2W F (AEP,UK,SP,AR,KR)	
R912	1-249-415-11	CARBON	680	5%	1/4W	
R913	1-249-426-11	CARBON	5.6K	5%	1/4W	
R914	1-249-419-11	CARBON	1.5K	5%	1/4W	
R915	1-249-417-11	CARBON	1K	5%	1/4W	
R916	1-249-420-11	CARBON	1.8K	5%	1/4W	
⚠R917	1-249-381-11	CARBON	1	5%	1/4W F	
⚠R918	1-249-381-11	CARBON	1	5%	1/4W F	
		< RELAY >				
RY701	1-515-920-11	RELAY (24V)				
		< THERMISTOR >				
⚠THP901	1-803-916-11	THERMISTOR, NTC				
**********						
	A-4728-653-A	POWER SWITCH BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
⚠C1	1-113-925-11	CERAMIC	0.01uF	20%	250V	
		< CONNECTOR >				
* CN801	1-770-314-11	PIN, CONNECTOR 2P				
		< SWITCH >				
⚠S801	1-554-920-11	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)				
**********						

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Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
⚠57	1-769-744-52	CORD, POWER (AEP,SP)	
⚠57	1-696-570-21	CORD, POWER (UK)	
⚠57	1-783-820-11	CORD, POWER (US,CND,MX)	
⚠57	1-783-941-22	CORD, POWER (AR)	
⚠57	1-824-778-11	CORD, POWER (KR)	
106	1-761-530-11	MAIN BOARD	
107	1-694-516-21	TERMINAL, SPEAKER	
⚠F901	1-532-504-31	FUSE, CYLINDRICAL (TIME-LAG) (T4A/250V) (AEP,UK,SP,AR,KR)	
⚠F901	1-533-310-11	FUSE, GLASS CYLINDRICAL (DIA.5) (6.3A/125V) (US,CND,MX)	
⚠F902	1-533-312-11	FUSE, GLASS CYLINDRICAL (DIA.5) (10A/125V) (US,CND,MX)	
⚠F902	1-533-949-31	FUSE, CYLINDRICAL (TIME-LAG) (T8A/250V) (AEP,UK,SP,AR,KR)	
FC1	1-543-993-11	CORE, FERRITE	
FC2	1-543-993-11	CORE, FERRITE	
IC1	6-700-752-01	IC ICE250A-SW	
SP1	1-825-067-11	SPEAKER (20cm)	
SP2	1-825-068-11	SPEAKER (5.7cm)	
SP3	1-825-068-11	SPEAKER (5.7cm)	
SP4	1-825-079-11	SPEAKER (1.9cm)	
⚠T201	1-437-793-11	TRANSFORMER, POWER (US,CND,MX)	
⚠T201	1-437-794-11	TRANSFORMER, POWER (AEP,UK,SP,AR,KR)	
⚠T901	1-437-232-11	TRANSFORMER, POWER (US,CND,MX)	
⚠T901	1-437-233-11	TRANSFORMER, POWER (AEP,UK,SP,AR,KR)	
**********			
		ACCESSORIES	
		**********	
⚠	1-569-008-21	ADAPTOR, CONVERSION 2P (SP)	
	1-769-329-21	CORD, CONNECTION (PIN-PIN)	
	1-791-467-11	CORD, SPEAKER (10m)	
	1-791-467-31	CORD, SPEAKER (3.5m)	
	4-222-421-01	SCREW (5X18), HEXAGON SOCKET	
	4-239-411-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH) (US,CND,MX)	
	4-239-411-21	MANUAL, INSTRUCTION (ENGLISH,FRENCH, GERMAN,ITALIAN) (AEP,UK)	
	4-239-411-31	MANUAL, INSTRUCTION (DUTCH,SPANISH, SWEDISH,POLISH) (AEP)	
	4-239-411-41	MANUAL, INSTRUCTION (PORTUGUESE, DANISH,FINNISH,RUSSIAN) (AEP)	
	4-239-411-51	MANUAL, INSTRUCTION (ENGLISH,FRENCH, SPANISH,TRADITIONAL CHINESE) (SP,AR)	
	4-239-411-61	MANUAL, INSTRUCTION (KOREAN) (KR)	
*	4-985-459-01	WRENCH, HEXAGON SHAFT	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

MEMO

REVISION HISTORY

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Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2002. 03	New
1.1	2002. 08	Addition of Destination (Korean Model)